

Claims

1. Purification installation for purifying a liquid, comprising:
  - a reactor vessel (1) containing a bed (3) of a granular medium;
  - a medium washer (2);
  - at least one gas lift system (4, 5);wherein the at least one gas lift system (4, 5) comprises a riser (4) with a suction inlet (6) located in the bed (3) and a blow outlet (7), at a higher position, opening into the medium washer (2), as well as gas feed means (20) for generating a gas lift in the riser (4) that draws up medium and liquid at the suction inlet and feeds these upwards through the riser (4) to the medium washer (2),  
wherein the medium washer (2) has a medium outlet (8) for returning washed medium to the bed (3);  
characterised in that the purification installation has a multiplicity of gas lift systems (4, 5), the respective blow outlets (7) of which emerge in the medium washer (2).  
  
2. Purification installation according to Claim 1, characterised in that two or more gas lift systems (4, 5) are provided per medium washer (2).  
  
20 3. Purification installation according to Claim 2, characterised in that the reactor vessel (1) contains a single medium washer (2).  
  
4. Purification installation according to Claim 2 or 3, characterised in that, viewed horizontally, the medium washer (2) is provided centrally with respect to the  
25 associated gas lift systems (4, 5).  
  
5. Purification installation according to one of the preceding claims, characterised in that, viewed horizontally, the medium washer (2) is provided centrally in the reactor vessel (1).  
  
30 6. Purification installation according to one of the preceding claims, characterised in that each gas lift system (4, 5) is provided at the bottom with a bowl (9), such as a cone (9), that is open at the top.

7. Purification installation according to Claim 6, characterised in that each bowl (9) is integral with the respective gas lift system (4, 5), such that each respective gas lift system (4, 5) can be fitted or removed as a unit together with the respective bowl (9) in each case.  
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8. Purification installation according to one of the preceding claims, characterised in that, viewed horizontally, the gas lift systems (4, 5) are distributed over the reactor vessel (1) in accordance with a pattern.  
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9. Purification installation according to one of the preceding claims, having a control system (50) equipped for mutually independent control of the gas feed (51, 52) to the respective gas lift systems (4, 5).  
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10. Purification installation according to one of the preceding claims, wherein the base (12) of the reactor vessel is essentially flat.
11. Purification installation according to one of the preceding claims, having a liquid feed system (10) for feeding the liquid to be purified into the bed (3).  
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12. Purification installation according to Claim 11, wherein the liquid feed system (10) comprises a multiplicity of parallel distribution arms (11) that are equipped for feeding liquid into the bed over the length of the distribution arms (11).